MEDDAC Memorandum 40-32

Medical Services

Administration of Emergency Issue Blood and Blood Products

Headquarters
U.S. Army Medical Department Activity
Fort George G. Meade
2480 Llewellyn Avenue
Fort George G. Meade, MD 20755-5800
23 January 2003

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SUMMARY of CHANGE

MEDDAC MEMO 40-32
Administration of Emergency Issue Blood and Blood Products

Specifically, this revision—

- Has been published in a new format that includes a cover and this "Summary of Change" page.

- Reformats the title page. The Contents section now includes the page numbers that the various chapters and paragraphs begin on.

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FOR THE COMMANDER:

DAVID A. BITTERMAN
LTC, MS
Deputy Commander for Administration

Official:

JOHN SCHNEIDER
Adjutant

History. This is the second revision of this publication, which was originally published on 22 August 2000.

Summary. This memorandum defines legal and professional procedures concerning the emergency requesting, issuing, storing, administering, accounting for and documenting of blood and blood components at Kimbrough Ambulatory Care Center (KACC).

Applicability. This memorandum applies to the Headquarters; U.S. Army Medical Department Activity, Fort George G. Meade (MEDDAC) (that is, KACC)).

Proponent. The proponent of this memorandum is the Deputy Commander for Nursing.

Suggested improvements. Users of this publication are invited to send comments and suggested improvements, by memorandum, directly to the Commander, U.S. Army Medical Department Activity, ATTN: MCXR-ZN, Fort George G. Meade, MD 20755-5800, or to the MEDDAC's Command Editor by fax to (301) 677-8088 or e-mail to john.schneider@na.amedd.army.mil.

Distribution. Distribution of this publication is by electronic medium only.

Contents (Listed by paragraph and page number)

* This publication supersedes MEDDAC Memo 40-32, dated 1 October 2001.

Contents–continued

Chapter 1
Introduction

1-1. Purpose
This memorandum sets forth responsibilities, policies and procedures as well as defines the legal and professional procedures concerning the emergency requesting, issuing, storing, administering, accounting for and documenting of blood at KACC.

1-2. References
Related publications and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations
Abbreviations used in this publication are explained in the glossary.

1-4. Responsibilities
a. *The Deputy Commander for Clinical Services (DCCS).* The DCCS will ensure all applicable physicians understand the policy for emergency issue of blood (packed red blood cells (PRBC)) at KACC, as stated in this directive; request emergency issue of blood in accordance with (IAW) the standing operating procedure (SOP) established by the Chief, Laboratory Service (LS).

b. *The Deputy Commander for Nursing (DCN).* The DCN will ensure that—

(1) All licensed nursing personnel working in the Operating Room (OR), Same Day Surgery (SDS) and Post-anesthesia Care Unit (PACU)—

(a) Understand that blood products may be administered only in an emergency by a physician or registered nurse (RN).

(b) Periodically review their competency-based training in the administration of blood.

(2) Head nurses submit after action reports, which discuss the overall process, to the office of the DCN immediately after patients transfer.

Chapter 2
Ordering and Issuing Blood

2-1. Ordering blood
a. All requests for blood will be submitted on the following forms, and must be accompanied by a properly drawn 7ml purple top tube.

(1) Standard Form (SF) 518 (Blood or Blood Component Transfusion).

(2) Walter Reed Army Medical Center (WRAMC) Form 183 (Emergency Blood Product Issue).

(3) WRAMC Form 1321 (Blood Product Issue and Utilization Review).

b. The patient's identification will be positively established at the time the specimen is drawn. Verify the patient's wristband and complete the patient identification section of SF 518, Blood and Blood Component Transfusion. It is recommended that the Typenex label be handwritten instead of stamped. Also place the same information on the blood tube label. Both the blood tube label and the SF 518 must contain the following information:

(1) The patient's full name.

(2) Family designated prefix and sponsor's social security number.

(3) Payroll signature of person drawing the blood specimen on the SF 518. Initials are allowed on the tube.

(4) Date the specimen was drawn.

(5) A verification signature and patient signature are not required on section 1 of SF 518.

c. The SF 518 must contain the following additional information:

(1) Location of patient and Uniform Chart of Accounts (the UCA code) for the clinic.

(2) Date and hour wanted. Do not use vague words such as now, ASAP and STAT.

(3) Physician's name.

(4) Type of product requested. (Enter "PRBC" only.)

(5) The block in section 1 entitled "Diagnosis" will indicate the type of procedure to be performed, not the clinical diagnosis. Other information concerning prior transfusion and pregnancy should be provided.

d. The specimen, Typenex label, and the transfusion request will be legibly identified and completed as stated in paragraphs *b* and *c* above. If any portion of the information is missing, mismatched or illegible, the specimen cannot be safely processed and will not be accepted by LS. Labeling must be completed prior to the specimen leaving the presence of the patient.

2-2. Issue of blood to the OR, SDS and PACU

a. Under no circumstances will blood be stored, even for brief periods, in refrigerators outside the laboratory. Blood should not be picked up from the LS until just prior to the intended transfusion and after intravenous (IV) access is obtained. If a delay in starting the transfusion occurs, return the blood to LS within ten minutes of issue. WRAMC Form 183 (Emergency Blood Product Issue) will be used to request blood, and will contain the following information:

(1) Patient's full name.

(2) Family member designator prefix.

(3) Social security number (SSN).

(4) Date.

(5) Name of physician requesting unit or nurse representative RN.

(6) Criteria for request.

b. The physician or RN will obtain the blood administration set from the OR.

Chapter 3
Administration of Blood, and Emergency Transfusion Reactions

3-1. Administration of blood

a. Prior to administering blood, circumstances permitting, obtain informed consent. Obtaining informed consent is the responsibility of the attending physician.

b. Only an RN or physician may administer blood. The RN or physician who administers the blood is the *transfusionist*. The *verifier* may be a licensed practical nurse, RN or physician.

c. Blood will be given only with a physician's order.

d. At the time of infusion—

(1) Identify the recipient. Before administering the blood, the transfusionist and the verifier must verify—

(a) The recipient's name and SSN, as stated by the recipient, are identical to the name and SSN on the recipient's identification bracelet and the bag.

(b) The Typenex number on the bag and the Typenex number on the SF 518 are identical.

(c) The blood donor number, blood group and Rh type on the bag and on the bag label are identical.

(d) Designation of emergency release blood and expiration date to current date.

e. If any information listed in para d(1)(a) through (d) does not match, or the identity of the patient is questionable, do not start transfusion. Return the blood to LS.

f. Observe and record the following information on WRAMC Overprint (OP) 558 (Anesthesia Record), or SF 509 (Medical Record – Progress Notes):

(1) Explanation of the procedure to the patient, to include potential hazards as well as signs and symptoms of adverse reaction that he/she should report to the staff.

(2) Type of component and unit identification number.

(3) Date and time transfusion started.

(4) Patient's vital signs (initial vital signs in verification section of SF 518, above signatures).

(5) Patient's general condition.

(6) Vital signs at 15-minute intervals, twice; then at 30-minute intervals, twice; then at one-hour intervals until blood is completed.

(7) Volume given (that is, one unit or number of milliliters (ml)) if unit stopped. (A unit of packed blood cells has a volume of approximately 250ml.)

(8) Patient's condition and vital signs after transfusion.

g. The transfusionist should remain with the patient for the initial 5 to 15 minutes of the infusion. NOTE: Catastrophic events such as anaphylactic reactions or massive hemolysis due to blood type incompatibility usually become apparent after a very small volume enters the patient's circulation. If there is no evidence of such a reaction, the rate of infusion can be increased to a rate in which the unit can be infused within two hours or as otherwise specified by the physician's order. The transfusion of a unit should at no time take any longer than four hours. The patient should remain under observation for at least one hour after transfusion has been completed.

h. Complete section III (Record of Transfusion Administration) of SF 518. The transfusionist and verifier must sign. Record initial vital signs above the signature in this section.

i. Filters. Blood (that is, PRBCs) must be given through a designated transfusion filter set designed to retain clots and other debris. (Port size 170 to 260 units.) A filter may be used up to four hours and may ordinarily be used for two to four units of blood.

j. Intravenous cannula. For infusion of red blood cells, an 18 or 19 gauge cannula provides an adequate flow rate without excessive discomfort to the patient.

k. Compatible fluids. The only compatible intravenous solution for use with blood is 0.9% sodium chloride.

l. Slow rate of blood flow. If blood flows slower than the desired rate, the filter or the cannula may be obstructed. Additionally, the component may be too viscous for rapid flow through the administrative set. To investigate and correct the problem—

(1) Elevate the blood container to increase gravitational pressure.

(2) Check the patency of the cannula.

(3) Examine the filter of the administration set for excessive debris.

(4) PRBCs is the only blood that may be mixed with intravenous solution (that is, 0.9% sodium chloride solution) to facilitate its administration.

m. Blood warmers. Blood warmers will be used in cases where patients are to receive large volumes of refrigerated blood during a short time (that is, rates faster than 100ml per minute). Transfusions at this rate generally only occur in the Operating Room. The following guidelines will be used if a blood warmer is indicated:

(1) An in-line blood warmer with a visible thermometer and audible alarm will be used.

(3) Blood will not be warmed above 38 centigrade.

(4) Quality control of blood warmers is the responsibility of the Medical Maintenance.

(5) Only medical maintenance will perform service on blood warmers.

n. Fill out post transfusion data section III of SF 518. Place the medical record copy of the SF 518 in the patient's clinical chart, dispose of the empty bag in contaminated waste, and return a copy of the SF 518 to LS before the end of shift. All blood administration will be documented on WRAMC OP 558, with evaluation of the patient's tolerance of transfusion.

3-2. Transfusion reactions

a. Patient care personnel will observe the patient frequently during the transfusion.

b. Following are the signs of transfusion reaction:

(1) Increased temperature, respiration, pulse or arterial blood pressure.

(2) Nausea.

(3) Vomiting.

(4) Chest discomfort or pain.

(5) Chills.

(6) Shortness of breath.

(7) Pruritus.

(8) Low back pain.

c. If a suspected adverse reaction to a transfusion of blood occurs, stop the infusion immediately. Allow the blood product to remain hanging and keep the vein open by infusing normal saline. Immediately notify the patient's physician and LS. An LS representative will consult with the patient's physician to determine the nature and severity of the problem and which diagnostic tests will be performed to evaluate the reaction.

d. If the physician or LS requests a work-up, the following samples and requisitions must be submitted:

(1) One 7ml lavender top tube, one 7ml red top tube, and one freshly voided post-reaction urine sample.

(2) The blood container and the infusion set of the suspected unit.

(3) The second copy of the completed SF 518 for the suspected unit. (Complete section III of SF 518, to include the amount of blood transfused, date, time the transfusion was interrupted, and symptoms observed.) Retain the first copy of the completed SF 518 and place it in the patient's chart.

(4) Highlight the urine request with the phrase, "Submitted for post transfusion reaction work-up." If a urine sample is unobtainable, do not delay sending the blood specimens to LS.

e. The following types of suspected transfusion reactions should be reported to LS. (Simple urticarial reactions with no change in vital signs need not be reported.)

(1) Febrile.

(2) Acute hemolytic.
(3) Delayed hemolytic.
(4) Anaphylactic.
(5) Septic or infectious.
(6) Post-transfusion hepatitis.

Appendix A
References

Section I
Required Publications

This section contains no entries.

Section II
Related Publications

A related publication is merely a source of additional information, the user does not have to read it to understand this publication.

AR 310-50
Authorized Abbreviations, Brevity Codes, and Acronyms

Accreditation Requirements Manual, AABB, 6th Edition.

American Association of Blood Banks AABB Technical Manual, 12th Edition., 1996.

Kimbrough Ambulatory Care Center Laboratory Collection and Submission Manual, September 1997.

Section III
Prescribed Forms

This section contains no entries.

Section IV
Referenced Forms

SF 509
Medical Record – Progress Notes

SF 518
Blood or Blood Component Transfusion

WRAMC Form 183
Emergency Blood Product Issue

WRAMC Form 1321
Blood Product Issue and Utilization

WRAMC OP 558
Anesthesia Record

Glossary

Section I
Abbreviations

BPRC
packed red blood cells

DCCS
Deputy Commander for Clinical Services

DCN
Deputy Commander for Nursing

IAW
in accordance with

IV
intravenous

KACC
Kimbrough Ambulatory Care Center

LS
Laboratory Service

MEDDAC
U.S. Army Medical Department Activity, Fort George G. Meade

ml
milliliter

OR
Operating Room

PACU
Post-anesthesia Care Unit

RN
registered nurse

SDS
Same Day Surgery

SF
standard form

SOP
standing operating procedure

SSN
social security number

WRAMC
Walter Reed Army Medical Center

Section II
Terms

This section contains no entries.